

SUBSTITUTE SPECIFICATION (clean version)

SHEET OF ABSORBENT PAPER

BACKGROUND OF THE INVENTION

[0001] This invention relates to the field of products for sanitary or household use made with sheets of absorbent paper, such as tissue paper.

[0002] In particular, the invention relates to a sheet comprising at least one embossed ply for use essentially as toilet paper but also as a handkerchief, a table napkin or optionally an all-purpose paper towel. In the sanitary or household paper industry, products of this type are manufactured with an absorbent paper, generally creped, with a low basis weight or grammage, namely tissue paper, also called cotton tissue. The elongation capacity conferred by the creping process allows the sheet to be embossed. This operation consists in permanently deforming the sheet between a rigid cylinder featuring elements in relief or "picots" on its surface, and a mating cylinder for example one with a resilient coating. Thus, the apparent thickness of the sheet is increased by the protuberances on one side. Cavities on the other side correspond to these protuberances.

[0003] The trend in recent years has been to make tissue paper products softer and plusher by enhancing their thickness and strength characteristics through this embossing process. This embossing also makes it possible to improve the visual appeal of the product through a judicious selection of the embossing pattern. Under this invention, the embossing process is carried out on paper with a low rate of humidity during a paper sheet transformation stage downstream of the paper machine.

[0004] Most often the embossing patterns consist of a series of elementary protuberances having a small transverse section and a simple geometric shape. One example is described in U.S. Patent No. 3 414 459, which pertains to a sheet consisting of a plurality of superimposed plies that are glued together. The plies have been embossed with a distribution frequency and height of protuberances suitable for the manufacture of